Product name	LTE+NR distributed small cell High Power Product Datasheet
Version Document Number	LTE/NR/GRAN/ver3.0

LTE+NR distributed small cell High Power

Product Datasheet

LTE+NR distributed small cell High Power Product Catalog

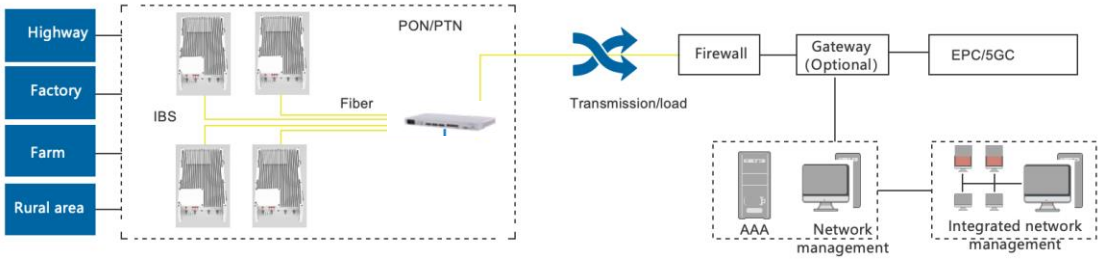
Product Category		4G BBU+ 5G BBU	RU
LTE+NR Distributed small cell High Power	B5 10M(MIMO 2T2R IBW30M)+ N1 40M(MIMO 2T2R IBW60M) 2*10W+2*10W	BRBU540201+ BRBU550206	BRBU550206
	B5 10M(MIMO 2T2R IBW30M)+ N1 40M(MIMO 2T2R IBW60M) 2*20W+2*20W		BRRU59A601
	B5 10M(MIMO 2T2R IBW30M)+ N28 40M(MIMO 2T2R IBW45M) 2*10W+2*10W		BRRU58A801
	B5 10M(MIMO 2T2R IBW30M)+ N28 40M(MIMO 2T2R IBW45M) 2*20W+2*20W		BRRU59A801
	B3 20M(MIMO 2T2R IBW75M)+ N1 40M(MIMO 2T2R IBW60M) 2*10W+2*10W		BRRU58A401
	B3 20M(MIMO 2T2R IBW75M)+ N1 40M(MIMO 2T2R IBW60M) 2*20W+2*20W		BRRU59A401

Product Introduction:

The distributed outdoor high-power base station system, equipped with 2*10W+2*10W/ 2*20W+2*20W RF remote head end. The baseband unit (BBU) is connected to the EPC core network through IPsec (IPRAN), and the system adopts a star network architecture to provide LTE+NR services to users.

The system design achieves rapid deployment and network construction, with very low maintenance costs, providing small cell coverage, and improving various outdoor weak signal coverage.

System Overview



Network Diagram

Product Features:

✓ Support GPS,RGPS, 1588 synchronization

✓ Supports each cell 800 user NR access status and 400 NR user VONR, each cell 512 user LTE access status and 256 user VOLTE providing voice, video, data and mobile communication services for terminals

✓ Supports multiple IP network back haul solutions such as xPON/PTN/IPRAN

✓ Supports PSK authentication, digital certificate authentication, and ESP encrypted transmission

✓ Supports SON, remote management, and TR069 network management functions

✓ Support AC 220V/DC -48V power supply

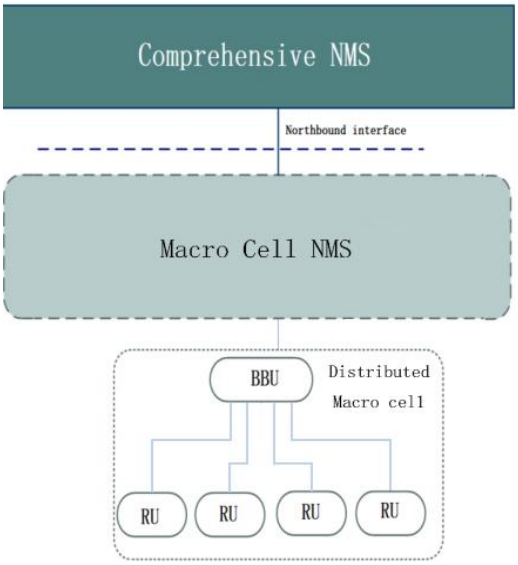
✓ Antennas can be installed externally or in an integrated manner

Product Drawing:

NR BBU

LTE BBU

LTE+NR RU



NETWORK DIAGRAM

Product specifications:

Frequency-Band	B5+N1:B5 10M(MIMO 2T2R IBW30M)+N1 40M(MIMO 2T2R IBW60M) B5+N28:B5 10M(MIMO 2T2R IBW30M)+N28 40M(MIMO 2T2R IBW45M) B3+N1:B3 20M(MIMO 2T2R IBW75M)+N1 40M(MIMO 2T2R IBW60M)
Subcarrier spacing	NR:30kHz LTE:15kHz
Cell No.	2
Division and merger of residential areas	Support
Maximum output power	2*10W+2*10W/2*20W+2*20W
Wireless Protocol	Support 3GPP R15
Network Architecture	Support SA/NSA
User number	NR:Each cell supports 800 RRC connected users and 400 RRC activated users LTE:Each cell supports 512 RRC connected users and 256 RRC activated users
Peak rate	TDD: DDDDD DDSUU frame structure 4-channel: Downlink-1.35Gbps, Uplink-210Mbps FDD:IBW-20MHz 4-channel: Downlink-300Mbps, Uplink-150Mbps
Voice plan	VoNR,VoLTE,eSRVCC, CSFB
Internet function	Support TR069/SON/VLAN/IPRAN/PON
Security capabilities	SupportIPSec,support digital certificate authentication, USIM card authentication
Antenna	Can be connected to 4 external antennas to form MIMO
Synchronously	GPS,RGPS, 1588v2：±0.05ppm
EVM	QPSK:17.5%、16QAM:12.5%、64QAM:5%、256QAM:3.5%
Sensitivity	NR:≤-106dBm LTE:≤-103dBm
ACLR	≤-45dBc
Spurious emissions	3GPP TS 36.104 R9 Category B
Emission intermodulation	3GPP TS 36.104 R9 Home BS limits for 10,20 MHz channel bandwidth (E-UTRA bands ≤ 3GHz)
Block	3GPP TS 36.104 [2] subclause 7.6.1
VSWR	≤1.5

Temperature	BBU:-25℃～+45℃;RU:-40℃～+55℃
Power consumption	NR-BBU:190W;LTE-BBU:40W; RU:500W（2*10W+2*10W）,750W（2*20W+2*20W)
Waterproof level	BBU:IP30;RU:IP65
Power supply	BBU:AC220V/DC-48V;RU:AC220V/DC-48V

Interface Description:

NR BBU Interface is shown in the figure:

The meaning of each interface is shown in the following table:

Interface definition	Quantity	Connector type
POWER IN	1	DC-48V：terminal /AC220V:3-pin
TOD IN	1	RJ45
TOD OUT	1	RJ45
BACKHAUL OPTIC	1	SFP+
GPS	1	SMA-K
RGPS	1	RJ45
FRONTHAUL OPTIC	2	SFP+
LAN	1	RJ45
WAN	1	1*RJ45;1*SFP+ GE
RST	1	REST

LTE BBU Interface is shown in the figure:

The meaning of each interface is shown in the following table:

Interface definition	Quantity	Connector type
RGPS	2	RJ45
OP	8	SFP+
LAN	2	RJ45
WAN	4	2*RJ45;2*SFP+
RST	2	REST
GND （rear interface）	1	307 Terminal

POWER SWITCH（rear interface）	1	Boat-shaped switches
POWER IN（rear interface）	1	AC 220V:3-PIN

NR+LTE RU Interface is shown in the figure：

Interface definition	Quantity	Connector type
OPGW&POWER IN	1	PG11
ANT	4	FC/PC
LAN(Maintenance)	1	RJ45
TQF	1	TQF
GND	1	

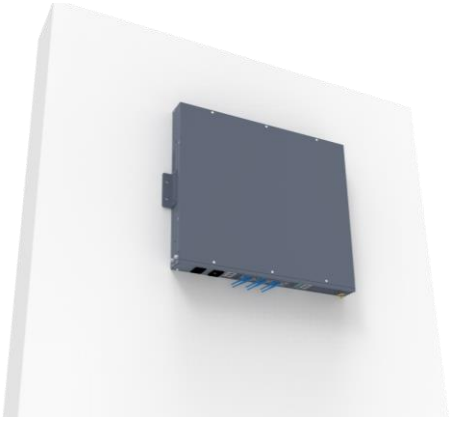
General product parameters and engineering installation：

Category	Size	Package size	Net weight	Gross weight	Engineering installation
NR-BBU	438mm*380mm*44mm	535mm*420mm*125mm	5.6kg	6.4kg	19inch installation or wall mounted installation
LTE-BBU	441mm*264mm*44mm	500mm*310mm*125mm	4.45kg	5.2kg	19inch installation or wall mounted installation
2*2T2R RU	447mm*357mm*203mm	550mm*398mm*336mm	28.2kg	29.6kg	Wall mounted installation or clamp installation

BBU Engineering installation

NR BBU 19inch cabinet installation

LTE BBU 19inch cabinet installation



NR BBU wall mounted installation

LTE BBU wall mounted installation

RU Engineering installation

RU clamp installation

RU Wall mounted installation